

can be formed into an angled contact shape to facilitate installation and removal of a mating plug connector that can cause spring arms to allow distal ends to deflect up and at least partially out of receiving cavity 240 when a mating plug connector is received with in the receiving cavity. Ground spring 210 can be made out of any suitable metal.

[0040] FIG. 7 illustrates a simplified perspective view of bracket 205 attached to plug connector 150. As shown in FIG. 7, transverse extensions 305a, 305b are welded to respective extensions 320a, 320b creating a mechanical and electrical connection between plug connector 150 and bracket 205. In some embodiments a breaking strength of the welds can be designed to be less than a breaking strength of plug connector 150 and/or a corresponding receptacle connector (see FIG. 1). This can enable the weld to function as a safety feature so if a force is applied to connector assembly 165 through electronic device 105 (see FIG. 1) the weld breaks before the electronic device.

[0041] Bracket 205 can be formed using stamping, molding or any other suitable process. In some embodiments bracket 205 can be formed from a stainless steel sheet that is between 0.1 millimeters and 0.5 millimeters thick to provide a balance of strength, support, and enough resiliency to allow plug connector 150 to deflect during insertion and removal of electronic device 105. In one embodiment bracket 205 is formed from a sheet that is between 0.2 millimeters and 0.4 millimeters thick. In further embodiments, bracket 205 can be attached to accessory 100 with one or more fasteners (see FIG. 3). In other embodiments bracket 205 can be secured to accessory 100 (see FIG. 1) using adhesive, welding or another bonding process.

[0042] Although the embodiments discussed herein use an example axisymmetric plug connector 150, connector assembly 165 can be used with any type of plug or receptacle connectors. For example, in other embodiments connector assembly 165 can include a Universal Serial Bus (USB) connector that can be a Type A, B, C, mini, micro or other type of USB connector. In further embodiments connector assembly 165 can include an RJ-45, HDMI, or other type of connector. One of skill in the art will appreciate that connector assembly 165 can be used with a myriad of connectors (based on an industry standard or proprietary) and the embodiments described herein are not limited to any particular type or configuration of connector.

[0043] Although accessory 100 is described as one particular type of electronic accessory, embodiments of the invention are suitable for use with a multiplicity of electronic accessories and devices that include a connector assembly that provides a low-impedance ground path between two connector plugs. For example, any device or accessory that includes two or more connectors can be used with the invention. In some instances, embodiments of the invention are particularly well suited for use with accessories and/or electronic media devices because of their potentially small form factor. As used herein, an electronic media device includes any device with at least one electronic component that may be used to present human-perceivable media. Such devices may include, for example, portable music players (e.g., MP3 devices and Apple's iPod devices), portable video players (e.g., portable DVD players), cellular telephones (e.g., smart telephones such as Apple's iPhone devices), video cameras, digital still cameras, projection systems (e.g., holographic projection systems), gaming systems, PDAs, desktop computers, as well as tablet (e.g.,

Apple's iPad devices), laptop or other mobile computers. Some of these devices may be configured to provide audio, video or other data or sensory output.

[0044] For simplicity, various internal components, such as the control circuitry, graphics circuitry, bus, memory, storage device and other components of the electronic device 105 and accessory 100 are not shown in the figures.

[0045] In the foregoing specification, embodiments of the disclosure have been described with reference to numerous specific details that can vary from implementation to implementation. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense. The sole and exclusive indicator of the scope of the disclosure, and what is intended by the applicants to be the scope of the disclosure, is the literal and equivalent scope of the set of claims that issue from this application, in the specific form in which such claims issue, including any subsequent correction. The specific details of particular embodiments can be combined in any suitable manner without departing from the spirit and scope of embodiments of the disclosure.

[0046] Additionally, spatially relative terms, such as “bottom” or “top” and the like can be used to describe an element and/or feature's relationship to another element(s) and/or feature(s) as, for example, illustrated in the figures. It will be understood that the spatially relative terms are intended to encompass different orientations of the device in use and/or operation in addition to the orientation depicted in the figures. For example, if the device in the figures is turned over, elements described as a “bottom” surface can then be oriented “above” other elements or features. The device can be otherwise oriented (e.g., rotated 90 degrees or at other orientations) and the spatially relative descriptors used herein interpreted accordingly.

1. A connector assembly comprising:

- a first connector having an exterior metallic shell and a receiving cavity sized to receive a plug portion of a mating connector;
- a second connector having an exterior metallic body;
- a bracket electrically and mechanically coupling the exterior metallic shell to the exterior metallic body; and
- a ground spring coupled to the exterior metallic shell and having at least one spring arm with a distal end that is positioned within the receiving cavity.

2. The connector assembly of claim 1 wherein the distal end is positioned to contact the plug portion of the mating connector when the plug portion is received within the receiving cavity.

3. The connector assembly of claim 2 wherein a ground path is formed between the second connector and the plug portion of the mating connector via the ground spring and the bracket.

4. The connector assembly of claim 1 wherein the ground spring is welded to the exterior metallic shell and welded to the bracket.

5. The connector assembly of claim 4 wherein the bracket is welded to the exterior metallic body.

6. The connector assembly of claim 1 wherein the ground spring includes a pair of spring arms, each having a distal end that protrudes through a corresponding aperture defined by the first connector.

7. The connector assembly of claim 1 wherein the second connector is a tab connector.